

## **The Officer Calibration Scale: Towards Improving Officers' Ability to Judge Unit Climate in the Canadian Army**

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Organizational climate has been repeatedly linked to various outcomes (e.g., performance, customer and employee satisfaction, productivity, and sales; e.g., Jurkiewicz & Massey, 1997). However, although many efforts have focused on measuring organizational climate at a global level, little attention has been directed to the accurate measurement of the unit climate at different levels of the organization, such as supervisors' perceptions of what their subordinates perceive the organizational climate to be. As in other organizations, leaders at all levels of the military attempt to informally gauge the perceptions of organizational climate held by subordinates within their units. Research has found a discrepancy between leaders' assessments and subordinates' actual opinions (e.g., Stouffer et al., 1949), yet the ability to make accurate climate assessments is critical for effective leadership, especially in a combat situation.

The "Officer Calibration Scale" was developed to assess the degree to which Canadian Army officers are capable of accurately judging their subordinates' perceptions of morale, cohesion, and their confidence in leadership. In addition to determining the level of discrepancy between officers' and subordinates' perceptions of climate, it was hypothesized that making officers aware of any discrepancies would result in them re-calibrating both their judgment of the climate and their confidence in that judgment over several repeated applications of the Officer Calibration Scale. Research has shown that making a leader aware of these discrepancies can facilitate the leader's success (Becker, Ayman, & Korabik, 2002). A discussion of the previous research on discrepant perceptions of climate will precede the presentation of the development, administration, and results of the Officer Calibration Scale.

### *Previous Research on Climate Perceptions*

Briefly, perceptions of organizational climate have been linked to many different outcome variables. For example, Kozlowski and Doherty (1989) found that subordinates with high-quality relationships with their supervisors had more positive perceptions of climate dimensions, and that these perceptions were more in line with their supervisors than subordinates with lower-quality relationships. Several different countries have assessed the discrepancies between leaders and subordinates on perceptions of climate across several different occupations and organizational settings (e.g., the military, hospitals, etc.). Although the organization settings vary widely, overall the results have been similar. Furthermore, a call has been made to assess perceptions of organizational climate and leadership at a unit level vice a global level because it is believed that the direct and mediating effects of local leaders are likely to have large impacts on the processes and events within the unit (Kozlowski & Doherty, 1989).

*Military Studies.* The seminal work of Stouffer et al. (1949) found that "officers tended to believe that their men were more favorably disposed on any given point" (p. 392) than the men actually were. One explanation for this divergence was that the officers might project their own attitudes, either negative or positive, onto the soldiers, thereby resulting in

officers' inaccurate assessment of their soldiers' attitudes (Stouffer et al, 1949). This disparity in agreement between officers/enlisted was noted in officers' overestimating the levels of job satisfaction, confidence in leadership, and pride as soldiers, and underestimating aggression towards the military (Stouffer, et al., 1949). One suggested contributing factor toward this discrepancy was officer training; that is: training may have failed to provide officers with the skills necessary to effectively assess the attitudes of their soldiers.

In 1985, Gabriel (as cited in Eyres, 1998) found similar discrepancies in perceptions within the U.S. Army. Analyses from an annual survey revealed the following changes in soldiers' attitudes towards leadership: (a) 48% of the soldiers believed their officers to be competent (a reduction of ten percent); (b) a large percentage of soldiers (45%) did not feel their NCOs were competent; and (c) 42% of soldiers perceived that their officers truly cared for them (a small decline of six percent).

Within the Swedish Army, Korpi (as cited in Eyres, 1998) also found that leaders at all levels consistently overestimated their subordinates' responses on morale-related questions. In addition to a fairly substantial error rate (22-25%), the degree of overestimation also increased with rank/position. Korpi also requested leaders to rate their confidence with their assessment and found that confidence was negatively related to accuracy.

Eyres (1998) revealed similar results within the Canadian Army with an anonymous survey of Army personnel (N = 911). The results of the survey revealed the following significant relationships: (1) Junior Non-commissioned members (i.e., NCMs) rated Senior NCMs' leadership ability significantly lower than all higher rank groups rated it; (2) NCMs rated Junior Officers' (i.e., Offrs) ability to lead significantly lower than officers rated it; and (3) Senior Offrs rated themselves significantly higher in leadership ability than all lower ranks rated them. Thus, it was revealed that leaders were overestimating the attitudes of their soldiers toward leaders. Although the Master Corporal and Senior NCM levels reported satisfaction with leadership, despite the discrepancies in rating leadership, less positive results were found with satisfaction of officer leadership. As a result, leaders "are not having the positive leadership effect on their subordinates that they think they do" (Eyres, 1998, p. 21).

In Australia, Griffin and Mathieu (1997) found that naval officers at different ranks levels viewed organizational climate differently. They also found limited support for the idea that interaction styles among certain levels within the hierarchy cascaded to lower levels. For example, senior officers' interaction at one level would influence how junior officers below them would interact. It was suggested that due to the influence of numerous factors (e.g., organizational climate, perceptions of leaders, in-group work processes) that interventions for leadership enhancement be "localized at the supervisory level to which they apply" (Griffin & Mathieu, 1997, p. 743), thereby further supporting the need for immediate leaders to be able to accurately gauge perceptions of climate.

*Non-military Studies.* While some studies have targeted the perceptual discrepancies between military leaders and subordinates on dimensions of climate, other studies have examined the climates of civilian organizations to determine if differences between supervisors and subordinates exist. For example, a study on organizational climate (e.g., organizational support, interpersonal support, and health norms) in a manufacturing company compared blue-collar workers to white-collar workers, and found significant discrepancies between the two groups on climate (Morris, Conrad, Marcantonio, Marks, & Ribisl, 1999). White-collar workers rated all dimensions of climate significantly higher than blue-collar workers (e.g., supervisor and co-worker social support; Morris et al., 1999). Similar results were found with government services employees; those who were supervisors rated satisfaction and climate constructs significantly higher than non-supervisors (Johnson, 2000).

Furthermore, discrepancies between leaders' self-perceptions and subordinates' perceptions of leadership often exist (Becker, Ayman, & Korabik, 2002). This discrepancy between leaders and subordinates on the topic of leadership appears to be amplified between genders. For example, Becker et al. (2002) found that female supervisors had higher levels of discrepancies between self and subordinate perceptions of their leadership behaviors than did males. The type of organization also influenced these differences between genders, such that women who were employed in traditional settings (e.g., education) had less discrepancy with their subordinates than women in less traditional settings (e.g., accounting, banking, and manufacturing). Thus, women in the military (i.e., in a non-traditional role) may be likely to have greater discrepancies between self and subordinates' perceptions of their leadership.

### *Officer Calibration Scale*

In 2002, the Officer Calibration Scale (OCS) was developed to assess the level of discrepancies between leader and subordinate perceptions, to measure confidence in assessments, and to, eventually, assist officers in re-calibrating any perceptual discrepancies they might have. The organizational climate dimensions to be measured were based on those measured with the Unit Climate Profile (UCP), a 47-item attitudinal scale administered to members of the Canadian Army holding the rank of Sergeant and below. The UCP measures the following 11 climate dimensions: morale/social cohesion, task cohesion, military ethos, professional morale, perceptions of immediate supervisor, and confidence in six different levels of leadership (e.g., Commanding Officer). Definitions of each climate dimension were developed based on the items used to measure each construct on the UCP, thereby increasing the likelihood that leaders and subordinates would be responding to similar constructs. Within the OCS, each climate dimension definition preceded a question on that dimension. Leaders were first asked to rate the statement "Estimate how the majority of the soldiers under your command would respond to the following statement" with regard to each climate dimension (e.g., Morale is very high in my unit) using a 5-point Likert type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

*Hypothesis 1:* Leaders (i.e., military members above the rank of Warrant Officer) will rate their perceptions of subordinates' (i.e., those with the rank of Sergeant and below) attitudes toward unit climate significantly higher than subordinates actually rated unit climate.

One suggested theoretical rationale for any potential discrepancies in climate ratings between leaders and subordinates was made by Farley (2002), who hypothesized that officers' overconfidence in their own judgments may cause them to be unable to accurately judge their soldiers' attitudes. Within cognitive and sensory judgment literature, considerable research has established a relationship between the accuracy and confidence of judgments (Baranski & Petrusic, 1999). Individuals are often overconfident in their judgments, especially if the judgments in question are difficult to make (Baranski & Petrusic, 1999). This overconfidence in the judgment of sensory tasks has also been found in cognitive judgment and intellectual knowledge tasks (Baranski & Petrusic, 1995; Baranski & Petrusic, 1999). Using these theories, confidence items were developed. Thus, immediately after each dimension rating, leaders were asked to rate the following statement "Indicate how confident you are in the accuracy of your rating" using a 4-point Likert-type scale ranging from 1 (*not at all confident*) to 4 (*highly confident*).

*Hypothesis 2:* Confidence ratings of the leaders will be fairly high (i.e., 3 or higher).

It is further hypothesized that, despite any discrepancies that exist between leaders' and subordinates' perceptions of unit climate, the confidence rating will be high.

*Hypothesis 3:* Confidence ratings will be fairly high (i.e., 3 or above) even if significant discrepancies exist between leaders' and subordinates' perceptions of unit climate.

As the ultimate goal is to reduce any potential discrepancies by providing feedback that will facilitate leaders in calibrating their ability to accurately judge the attitudes of their soldiers, the following hypothesis is offered.

*Hypothesis 4:* At Times 2 and 3, the confidence levels will initially be lowered (i.e., Time 2) until leaders re-calibrate their assessments of climate, and then confidence levels will raise (e.g., Time 3) such that low confidence is matched with discrepancies between leaders' and subordinates' perceptions of climate.

## Study

Although the results presented are based on an actual study, they have been altered due to the classified nature of the material. The general trends and significant outcomes have not been changed except for the purpose of disguising the origin of the unit. During an operational tour, a group of 659 leaders with the rank of Warrant Officer and above completed the OCS, while their subordinates (N = 1644) of the rank of Sergeant and below, completed the UCP. Both the OCS and UPC were subscales of the HDO.

*Analyses.* Results of the UCP were averaged for each unit climate dimension (i.e., appropriate individual items were averaged for each construct). The means for the climate dimensions were then added to a data file containing the OCP results. Identical demographic items were available for both data sets (e.g., unit, company, and platoon membership, rank, age, etc.). Identifiers of unit membership were of focal interest.

Next, in order to determine if the means of each climate dimension differed significantly among rank groups (i.e., Sergeants and below/Warrant Officers and above) t-tests were conducted, and in some cases analyses of variance (ANOVA; Tabachnick & Fidell, 2001), for each unit climate dimension were conducted. Results revealed significant differences between leaders and subordinates on several of the climate dimensions (refer to Figure 1), thereby supporting Hypothesis 1.

A review of the confidence ratings indicated that the average confidence rating for each climate dimension was over 3 (ranging from 3.29 to 3.52 on a 4-point Likert-type scale). Thus, leaders were fairly confident in their rating of subordinates' attitudes, thus supporting Hypothesis 2. Next a visual comparison of confidence ratings to climate rating discrepancies was conducted, based on the means of each of the three ratings. Although no analyses were conducted due to the insufficient group membership in each unit, it is apparent that confidence in ratings remained fairly high (i.e., 3 or over) even when significant discrepancies existed between leaders and their subordinates on climate dimensions; therefore offering possible support for Hypothesis 3. No analyses have been conducted to test Hypothesis 4.

## *Administrative Difficulties*

The OCS is administered in conjunction with the HDO scale, which is designed for members of the rank of Sergeant and below. Several difficulties have arisen with the administration of the OCS. To begin with, participation is voluntary, which influences the type (e.g., rank group or unit membership) and quantity of participants. Furthermore, as every effort is made to ensure confidentiality (e.g., names and service numbers of participants are not requested) in order to increase participation and candid responses, it is not possible to properly test the Time 2 for the OCS administration. A proper testing of Time 2 would require a direct comparison between one individual leader's ratings of climate and confidence. Thus, there is no way to ascertain whether leaders are: (a) receiving feedback on the discrepancies in

perceptions, and (b) if they have altered their confidence and climate ratings to determine if re-calibration has actually occurred. Therefore each administration is cross-sectional in nature and not longitudinal (the methodologically preferred design).

Another difficulty is with the representativeness of the sample. As participation is voluntary, it is unknown how representative the sample is of unit members and, more specifically, of unit leaders. Moreover, leaders/subordinate ratios are impossible to control, such that one group of subordinates may have had few or no leaders who participated in any one administration of the survey. In addition, as a census sampling technique is used with each of the administrations across an operational tour, this, coupled with the confidential nature of participation, means that the effects of common method variance are unknown.

#### Discussion

This preliminary study using the OCS provides further support that leaders are not accurately assessing their subordinates' perceptions of unit climate. Significant discrepancies were found between leaders and subordinates for several climate dimensions. Furthermore, confidence ratings were high even in the face of inaccurate judgments. The second objective of this study was to determine how to ameliorate leaders' assessment of climate in order to increase the likelihood of success. Although the hypothesis that officers will re-calibrate their assessment of subordinates' attitudes has not yet been formally tested, there is considerable hope that this will be the result. A change in confidence and assessment ratings would indicate that there is considerable potential to incorporate this knowledge into leadership training.

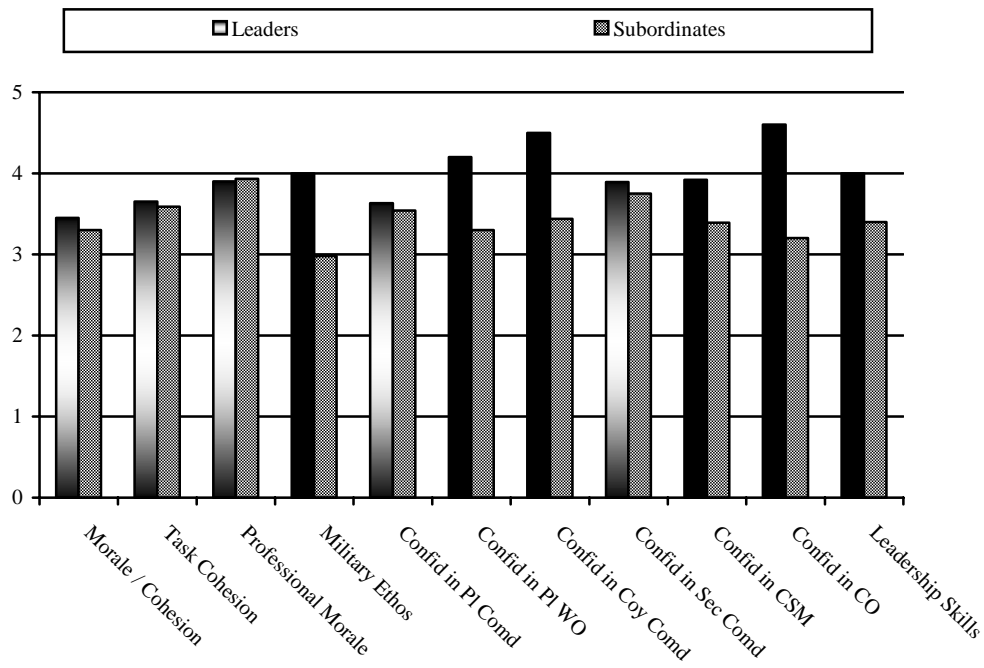
In fact, some research has considered why the discrepancy between leaders' and subordinates' perceptions, specifically on leadership, may exist. The roles of leaders' self-awareness and situational factors have been examined to determine what, if any role they play (Becker et al., 2002). For example, Becker et al. (2002) found that high self-monitors (i.e., those who focused on situational appropriateness and norms) were less effective leaders than low self-monitors (i.e., those who drew information from their internal selves). These factors could also be incorporated into leadership training. Furthermore, merely providing leaders with the results of the OCS and allowing them to re-calibrate their assessment and confidence could greatly reduce these attitudinal discrepancies and increase success. This form of feedback (i.e., upward feedback) has been linked with reduced divergent perceptions between leaders and subordinates (London & Wohlers, as cited in Becker et al., 2002).

As stated earlier, the ability to accurately judge unit climate will provide officers with an additional skill to maintain and/or improve morale, cohesion, confidence in leadership, and military ethos, which in turn will improve combat effectiveness. In addition to providing important feedback, and ultimately facilitating the calibration of judgments for leaders directly involved with these administrations, results from this study can also be used to develop pre-deployment and leadership training as the objective of the OCS is to be instructional rather than performance orientated. The ultimate goal of the OCS is to improve the effectiveness of leaders and, subsequently, of operational missions.

## References

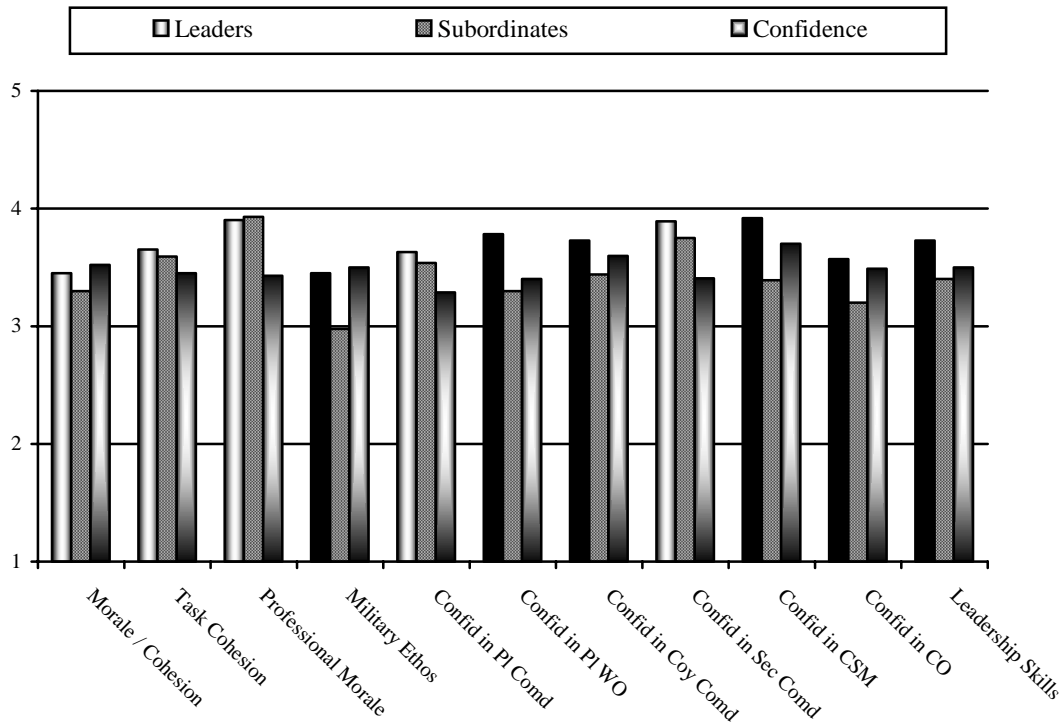
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Figure 1 – Mean Leader/subordinate Differences on Unit Climate Dimension



Note: Solid black bars indicate significant differences between leaders and subordinates.

Figure 2 – Mean Confidence Ratings in Comparison to Perceptual Discrepancies between Leaders and Subordinates.



Note: 1. Solid black bars indicate significant differences between leaders and subordinates.

2. Confidence is rated on a 4-point Likert type scale.